

CofC

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/707,453	
	Filing Date	12/15/2003	
	First Named Inventor	Che-Chih Chang	
	Art Unit	2871	
	Examiner Name	CHOWDHURY, TARIFUR RASHID	
Total Number of Pages in This Submission	26	Attorney Docket Number	ADTP0048USA

ENCLOSURES (Check all that apply)			
<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC	Certificate AUG 04 2006 Of Correction
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences	
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)	
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information	
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter	
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):	
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	1. A copy of the Front Page of Patent.	
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	2. Copies of response to office action submitted on 08/16/2005.	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Landscape Table on CD	3. Copies of reminder of title change submitted on 04/10/2006.	
<input type="checkbox"/> Reply to Missing Parts/Incomplete Application	<input type="checkbox"/> Remarks		
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	Request for Certificate of Correction of Office Mistake		

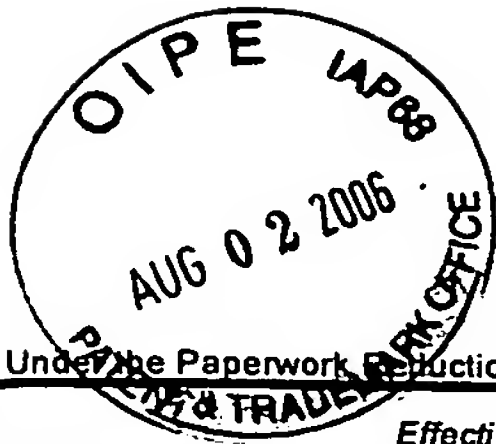
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	North America Intellectual Property Corporation		
Signature	<i>Winston Hsu</i>		
Printed name	Winston Hsu		
Date	AUG 01 2006	Reg. No.	41,526

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:			
Signature	<i>Brenda Lin</i>		
Typed or printed name	Brenda Lin	Date	AUG 01 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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AUG 07 2006



PTO/SB/17 (12-04v2)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Effective on 12/08/2004.

Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL

For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27TOTAL AMOUNT OF PAYMENT (\$)**0.00****Complete if Known**

Application Number	10/707,453
Filing Date	12/15/2003
First Named Inventor	Che-Chih Chang
Examiner Name	CHOWDHURY, TARIFUR RASHID
Art Unit	2871
Attorney Docket No.	ADTP0048USA

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: **50-3105** Deposit Account Name: **North America Intellectual Property Corporation**

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

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FEE CALCULATION**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
		Small Entity Fee (\$)		Small Entity Fee (\$)		Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims **Extra Claims** **Fee (\$)** **Fee Paid (\$)** **Multiple Dependent Claims**

_____ - 20 or HP = _____ x _____ = _____

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims **Extra Claims** **Fee (\$)** **Fee Paid (\$)**

_____ - 3 or HP = _____ x _____ = _____

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
_____ - 100 = _____	_____ / 50	_____ (round up to a whole number)	x _____ = _____	

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): _____

Fees Paid (\$)**SUBMITTED BY**

Signature	<i>Winston Hsu</i>	Registration No. (Attorney/Agent)	41,526	Telephone	3027291562
Name (Print/Type)	Winston Hsu			Date	AUG 01 2006

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

AUG 07 2006



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No. : US 7,061,558 B2 Issue Date : 06/13/2006
Serial No. : 10/707,453 Filing Date: 12/15/2003
Inventor : Che-Chih Chang, Chun-Min Ko
Docket No. : ADTP0048USA

Title: BACKLIGHT MODULE AND A LIQUID CRYSTAL DISPLAY USING THE SAME

To: Commissioner for Patents
P.O. BOX 1450
Alexandria, VA 22313-1450

Subject: Request for Certificate of Correction of Office
Mistake

The above-identified patent was issued on 06/13/2006. The applicant found that the invention title listed on the front page of the patent is not correct (Attachment 1). Documents on record indicate this as an Office mistake of consequence.

The applicant requested to change the invention title in response to Office Action submitted on Aug. 16, 2005 (Attachment 2), and paid issue fee with a reminder of the title change on Apr. 10, 2006 (Attachment 3).

The applicant hereby requests that a Certificate of Correction be issued under 37 CFR 1.322 to correct the invention title from "**backlight module having light-shielding layer under two adjacent fluorescent layers and a liquid crystal display using the same**" to "**BACKLIGHT MODULE AND A LIQUID CRYSTAL DISPLAY USING THE SAME**".

AUG 07 2006

Respectfully submitted,

Winston Hsu

Date: AUG 01 2006

Winston Hsu, Patent Agent No. 41,526

P.O. BOX 506, Merrifield, VA 22116, U.S.A.

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Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)

AUG 07 2006



US007061558B2

Please correct the invention title from "backlight module having light-shielding layer under two adjacent fluorescent layers and a liquid crystal display using the same" to "BACKLIGHT MODULE AND A LIQUID CRYSTAL DISPLAY USING THE SAME".

(12) **United States Patent**
Chang et al.

(10) **Patent No.:** **US 7,061,558 B2**
(45) **Date of Patent:** **Jun. 13, 2006**

(54) **BACKLIGHT MODULE HAVING
LIGHT-SHIELDING LAYER UNDER TWO
ADJACENT FLUORESCENT LAYERS AND A
LIQUID CRYSTAL DISPLAY USING THE
SAME**

(75) **Inventors:** Che-Chih Chang, Tai-Chung (TW);
Chun-Min Ko, Chang-Hua Hsien (TW)

(73) **Assignee:** AU Optronics Corp., Hsin-Chu (TW)

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) **Appl. No.:** 10/707,453

(22) **Filed:** Dec. 15, 2003

(65) **Prior Publication Data**
US 2004/0119909 A1 Jun. 24, 2004

(30) **Foreign Application Priority Data**
Dec. 18, 2002 (TW) 91136583 A

(51) **Int. Cl.**
G02F 1/1335 (2006.01)
G09G 3/36 (2006.01)
H01J 1/62 (2006.01)

(52) **U.S. Cl.** 349/70; 349/62; 349/63;
349/71; 345/102; 313/484

(58) **Field of Classification Search** 349/60-65,
349/32; 70, 71, 69; 345/102; 313/582, 583,
313/325, 326, 484, 485; 362/26, 31
See application file for complete search history.

(56) **References Cited**

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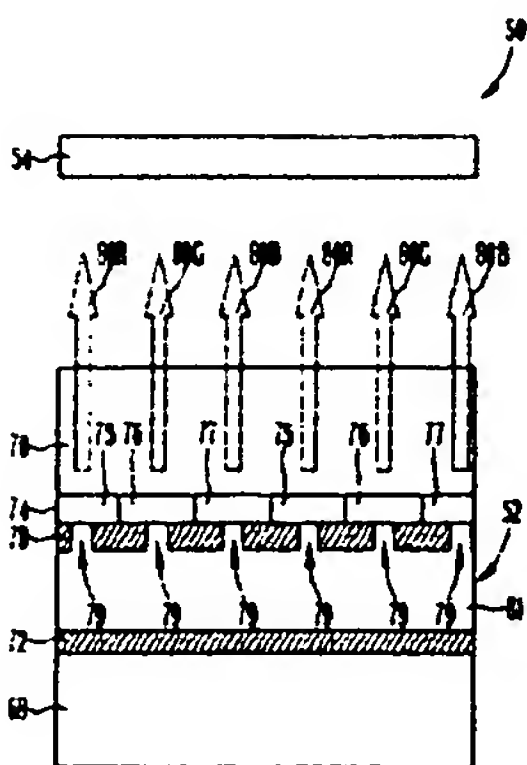
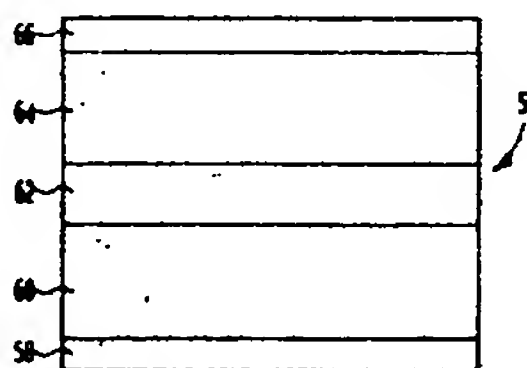
* cited by examiner

Primary Examiner—Tarifur R. Chowdhury
(74) *Attorney, Agent, or Firm*—Winston Hsu

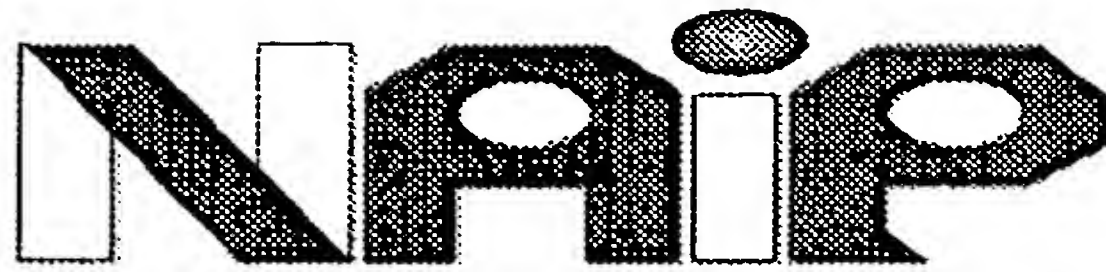
(57) **ABSTRACT**

A backlight module comprises an assembly of a rear substrate and a front substrate. A hermetic discharge gap is formed there between and mounted with power electrodes. The backlight module further comprises a discharge gas filled in the discharge gap and a plurality of fluorescent layers of different color emissions disposed on a surface of the assembly of the rear substrate and front substrate. The discharge gas is discharged by the power electrodes.

17 Claims, 7 Drawing Sheets



Attachment 2



**North America
Intellectual Property Corporation**

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From: Winston Hsu, Registration No. 41,526

Serial No.: 10/707,453

Attorney Docket No.: ADTP0048USA

Subject: Response to the Office Action mailed on 05/18/2005

Total Pages: 16 pages (including cover page)

Winston Hsu 08/16/2005

ADTP0048USA0_A2_1

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/707,453	
	Filing Date	12/15/2003	
	First Named Inventor	Che-Chih Chang	
	Art Unit	2871	
	Examiner Name	Chowdhury, Tarifur Rashid	
Total Number of Pages in This Submission	15	Attorney Docket Number	ADTP0048USA

ENCLOSURES (Check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below):
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT		
Firm Name	North America Intellectual Property Corporation	
Signature	<i>Winston Hsu</i>	
Printed name	Winston Hsu	
Date	8/16/2005	Reg. No. 41,526

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Signature	<i>Sammi Chang</i>	
Typed or printed name	SammiChang	Date 8/16/2005

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Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 350.00

Complete if Known

Application Number	10/707,453
Filing Date	12/15/2003
First Named Inventor	Che-Chih Chang
Examiner Name	Chowdhury, Tarifur Rashid
Art Unit	2871
Attorney Docket No.	ADTP0048USA

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____
☒ Deposit Account Deposit Account Number: 50-3105 Deposit Account Name: North America Intellectual Property Corp.

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee
☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

Total Claims Extra Claims Fee (\$) Fee Paid (\$) Multiple Dependent Claims
27 - 20 or HP = 7 x 50 = 350 Fee (\$) Fee Paid (\$)
HP = highest number of total claims paid for, if greater than 20
Indep. Claims Extra Claims Fee (\$) Fee Paid (\$)
- 3 or HP = x =
HP = highest number of independent claims paid for, if greater than 3

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets Extra Sheets Number of each additional 50 or fraction thereof Fee (\$) Fee Paid (\$)
- 100 = / 50 = (round up to a whole number) x =

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other: _____

SUBMITTED BY

Signature	<i>Winston Hsu</i>	Registration No. (Attorney/Agent)	41,526	Telephone	302-729-1562
Name (Print/Type)	Winston Hsu	Date	8/16/2005		

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

BACKLIGHT MODULE

Appl. No. : 10/707,453 Confirmation No. 1452
Applicant : Che-Chih Chang,
Chun-Min Ko
Filed : DECEMBER 15, 2003
TC/A.U. : 2871
Examiner : Chowdhury, Tarifur Rashid
Docket No. : ADTP0048USA0
Customer No. : 27765

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

AMENDMENT

Sir:

5 In response to the Office action of May 18, 2005, please amend the above-identified application as follows:

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims which begins on page 3 of this paper.

Remarks/Arguments begin on page 10 of this paper.

Appl. No. 10/707,453
Amdt. Dated August 16, 2005
Reply to Office action of May 18, 2005

Amendments to the Specification

Please replace the original title with the following new title:

**BACKLIGHT MODULE AND A LIQUID CRYSTAL DISPLAY USING THE
SAME**

5

Amendments to the Claims:

This listing of claims will replace all prior version, and listings, of claims in the application:

Listing of Claims:

5 Claim 1 (currently amended): A backlight module comprising:

an assembly of a rear substrate and a front substrate, a hermetic discharge gap being formed there between and mounted with power electrodes;

a discharge gas filled in the discharge gap, the discharge gas being discharged by the power electrodes; and

10 a plurality of fluorescent layers of different color emissions disposed on a surface of the assembly of the rear substrate and front substrate;

a light-shielding layer disposed under the two adjacent fluorescent layers of different color emissions; and

an opening disposed under each fluorescent layer.

15

Claim 2 (original): The backlight module of claim 1, wherein the fluorescent layers of different color emissions are disposed on an inner surface of the assembly of the rear substrate and the front substrate inside the discharge gap.

20 Claim 3 (original): The backlight module of claim 1, wherein the fluorescent layers of different color emissions are disposed on an outer surface of the front substrate outside

the discharge gap.

Claim 4 (cancelled)

5 Claim 5 (currently amended): The backlight module of claim [[4]] 1, wherein the light-shielding layer is a first reflective layer.

Claim 6 (currently amended): The backlight module of claim [[4]] 1, wherein the light-shielding layer is a black matrix.

10

Claim 7 (currently amended): The backlight module of claim [[1]] 5, further comprising a second reflective layer disposed on an inner surface of the assembly of the rear substrate and the front substrate inside the discharge gap.

15

Claim 8 (original): The backlight module of claim 1, wherein the fluorescent layers of different color emissions are arranged in a delta shape, in a mosaic shape, in a first strip shape, or in a second strip shape.

20 Claim 9 (original): The backlight module of claim 1, wherein the rear substrate and the front substrate are made of a glass material.

Claim 10 (currently amended): A liquid crystal display comprising:

a liquid crystal panel, the liquid crystal panel comprising:

a first substrate;

5 a second substrate parallel with and spaced apart from the first substrate; and

a liquid crystal layer disposed between the first substrate and the second substrate;
and

a backlight module, operable to illuminate the liquid crystal panel for displaying
color images, and the backlight module including a plurality of fluorescent layers
10 configured to emit light of different colors to the liquid crystal panel;

a light-shielding layer disposed under the two adjacent fluorescent layers of different
color emissions; and

an opening disposed under each fluorescent layer.

15 Claim 11 (original): The liquid crystal display of claim 10, wherein the backlight
module further comprising:

an assembly of a third substrate and a fourth substrate above the third substrate, a
hermetic discharge gap being formed there between and mounted with power electrodes;

a discharge gas filled in the discharge gap, and the discharge gas being
20 discharged by the power electrodes; and

a plurality of fluorescent layers of different color emissions being disposed on a surface of the assembly of the third substrate and the fourth substrate.

5 Claim 12 (original): The liquid crystal display of claim 11, wherein the fluorescent layers of different color emissions are disposed on an inner surface of the assembly of the third substrate and the fourth substrate inside the discharge gap.

10 Claim 13 (original): The liquid crystal display of claim 11, wherein the fluorescent layers of different color emissions are disposed on an outer surface of the fourth substrate outside the discharge gap.

Claim 14 (cancelled)

15 Claim 15 (currently amended): The liquid crystal display of claim [[14]] 10, wherein the light-shielding layer is a first reflective layer.

Claim 16 (currently amended): The liquid crystal display of claim [[14]] 10, wherein the light-shielding layer is a black matrix.

20 Claim 17 (currently amended): The liquid crystal display of claim [[11]] 15, further comprising a second reflective layer disposed on an inner surface of the assembly of the

third substrate and the fourth substrate inside the discharge gap.

Claim 18 (original): The liquid crystal display of claim 11, wherein the fluorescent layers of different color emissions are arranged in a delta shape, in a mosaic shape, in a first strip shape, or in a second strip shape.

Claim 19 (original): The liquid crystal display of claim 11, wherein the fourth substrates is permeable to ultraviolet rays.

Claim 20 (new): A backlight module comprising:

an assembly of a rear substrate and a front substrate, a hermetic discharge gap being formed there between and mounted with power electrodes;

a discharge gas filled in the discharge gap, the discharge gas being discharged by a luminous body; and

a plurality of fluorescent layers of different color emissions disposed on a surface of the assembly of the rear substrate and front substrate.

Claim 21 (new): The backlight module of claim 20, wherein the luminous body comprises a cold cathode flat fluorescence lamp (CCFFL) and a light emitting diode (LED).

Claim 22 (new): The backlight module of claim 20, wherein the fluorescent layers of different color emissions are disposed on an inner surface of the assembly of the rear substrate and the front substrate inside the discharge gap.

5 Claim 23 (new): The backlight module of claim 20, wherein the fluorescent layers of different color emissions are disposed on an outer surface of the front substrate outside the discharge gap.

10 Claim 24 (new): The backlight module of claim 20, further comprising a light-shielding layer disposed between the two adjacent fluorescent layers of different color emissions.

15 Claim 25 (new): The backlight module of claim 24, wherein the light-shielding layer is a first reflective layer.

 Claim 26 (new): The backlight module of claim 25, wherein the light-shielding layer is a black matrix.

20 Claim 27 (new): The backlight module of claim 25, further comprising a second reflective layer disposed on an inner surface of the assembly of the rear substrate and the front substrate inside the discharge gap.

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Claim 28 (new): The backlight module of claim 20, wherein the fluorescent layers of different color emissions are arranged in a delta shape, in a mosaic shape, in a first strip shape, or in a second strip shape.

5

Claim 29 (new): The backlight module of claim 20, wherein the rear substrate and the front substrate are made of a glass material.

REMARKS/ARGUMENTS

1. Amendment to the specification, claims 7, 17, and claims 1, 10:

5 The non-descriptive title has been written to more clearly indicate the invention. The original title "BACK MODULE" is now more descriptively prosed as, "BACKLIGHT MODULE AND A LIQUID CRYSTAL DISPLAY USING THE SAME". Claims 7, 17 are amended to be dependent on claims 5, 15 to remove the problem with the lack of antecedent basis. The applicant has amended claims 1, 10 to respectfully add the limitations of claims 4, 14 in order to distinguish from Dirscheri et al. (US 6,683,659) , as will be explained below. No new matter is introduced through these amendments.

10 New claims 20-29 are added. Claim 20 recites a discharge gas is discharged by a luminous body. Claim 21 mentions the luminous body comprises a cold cathode flat fluorescence lamp (CCFFL) and a light emitting diode (LED). Paragraph [0018] of the applicant's specification states, " The backlight module 52 comprises a cold cathode flat fluorescence lamp (CCFFL) or a light emitting diode (LED) for use as a luminous body".
15 Thus, no new matter is added.

2. Rejection of claims 1, 2, 4-6 and 8-10 under 35 U.S.C. 102 (e) as being anticipated by Dirscheri et al. (US 6,683,659) .

20 Claims 1, 10 have been amended to overcome this rejection. Specifically, the limitations "a light-shielding layer disposed under the two adjacent fluorescent layers of different color emissions; and an opening disposed under each fluorescent layer" have been added to the claims. The amended claims 1 and 10 are different from Dirscheri et al. (US 6,683,659) , because of the following reasons:

(1) As illustrated in Fig. 2 of the applicant's invention, the light-shielding layer 78

and the opening 79 are under the two adjacent fluorescent layers 74. But, the black matrix 13 of Dirscheri et al. (US 6,683,659) are formed between the two phosphor layers 11, as Fig. 1 shows. The position of the light-shielding layer 78 of the present invention is different from the black matrix 13 of Dirscheri et al. (US 6,683,659) .

5 (2) The light-shielding layer 78 of the applicant's invention is able to reflect the UV light between the reflective layers 72, 78 to avoid the UV light loss. But the black matrix 13 of Dirscheri et al. (US 6,683,659) is able to absorb the UV light for purifying each color of the phosphor layer 11. The function of the light-shielding layer 78 of the applicant's invention is that the light-shielding layer 78 can gather the UV light. The function of the black matrix 13
10 of Dirscheri et al. (US 6,683,659) is that the black matrix 13 can absorb the UV light. The light-shielding layers (the black matrix) of these two cases have different functions.

 (3) Furthermore, the applicant's invention contains the opening 79 that disposed under each fluorescent layer 74. The light-shielding layer 78 of the applicant's invention is able to reflect the UV light between the reflective layers 72, 78 to avoid the UV light loss. Then, the
15 UV light emits from the opening 79 into the fluorescent layer 74. But Dirscheri et al. (US 6,683,659) doesn't have any opening under the phosphor layer.

Thus, the amended claims 1 and 10 are patentably distinguishable from Dirscheri et al. (US 6,683,659) . Reconsideration of the amended claims is politely requested.

20 **3. Rejection of claims 1, 2, 8-12, 18 and 19 under 35 U.S.C. 102 (e) as being anticipated by Sumiyoshi (US 2003/0122771).**

 In Fig. 22 and the twenty-eighth embodiment of Sumiyoshi (US 2003/0122771), it notes "both a common electrode 14 and a scanning electrode 13 are made up of a plurality of belt-shaped electrodes being placed in the same direction and each of the belt-shaped
25 electrodes serves as a backlight corresponding to light having one of R, G, and B colors can

be performed". And the gas layer 12 is disposed between the common electrode 14 and the scanning electrode 3, as Fig. 22 shows. Furthermore, when both the scanning electrode 3 of the substrate 22 and the common electrode 14 of the substrate 21 are discharged and produce the voltage between them, the voltage produces UV light and makes the fluorescent material layer 5 emit light. But, in applicant's invention, the voltage is produced by two adjacent power electrodes of the rear substrate. The applicant's structure and voltage producing method are therefore different from Sumiyoshi (US 2003/0122771).

Thus, the amended claims 1 and 10 are patentably distinguishable from Sumiyoshi (US 2003/0122771). Reconsideration of the amended claims is politely requested.

10

4. Rejection of claim 3 under 35 U.S.C. 103 (a) as being anticipated by Dirscheri et al. (US 6,683,659) .

Claims 1 and 10 are patentably distinguishable from Dirscheri et al. (US 6,683,659) for the above-mentioned reasons. Their dependent claims are also patentable.

15

5. Rejection of claim 7 under 35 U.S.C. 103 (a) as being anticipated by Dirscheri et al. (US 6,683,659) in view of Eom (US 2004/0051819).

Claims 1 and 10 are patentably distinguishable from Dirscheri et al. (US 6,683,659) for the above-mentioned reasons. Their dependent claims are also patentable.

20

6. Rejection of claims 3 and 13 under 35 U.S.C. 103 (a) as being anticipated by Sumiyoshi (US 2003/0122771).

Claims 1 and 10 are patentably distinguishable from Sumiyoshi (US 2003/0122771) for the above-mentioned reasons. Their dependent claims are also patentable.

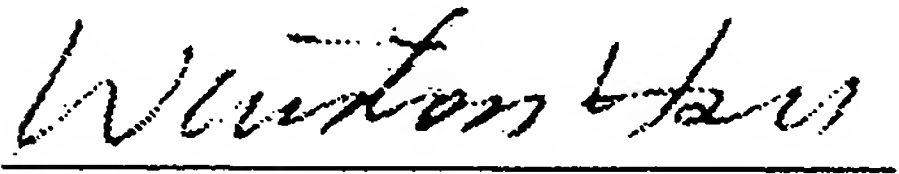
Appl. No. 10/707,453
Amdt. Dated August 16, 2005
Reply to Office action of May 18, 2005

7. Rejection of claims 14-16 under 35 U.S.C. 103 (a) as being anticipated over Sumiyoshi (US 2003/0122771) in view of Dirscheri et al. (US 6,683,659) .

5 Claims 1 and 10 are patentably distinguishable from Sumiyoshi (US 2003/0122771) and Dirscheri et al. (US 6,683,659) for the above-mentioned reasons. Their dependent claims are also patentable.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

10 Sincerely yours,

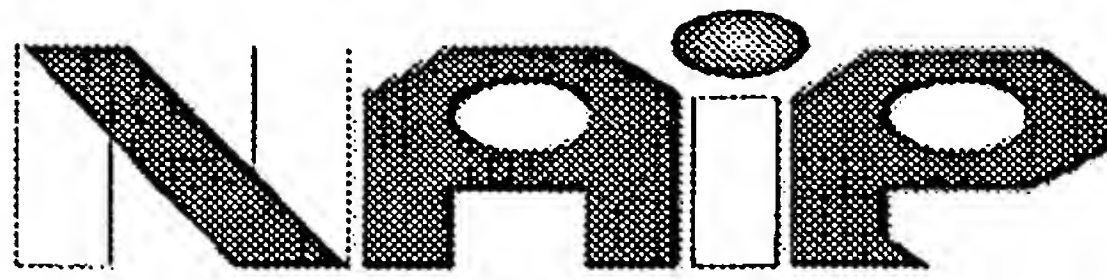


Date: August 16, 2005

Winston Hsu, Patent Agent No. 41,526
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20 Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)

Attachment 3



**North America
Intellectual Property corporation**

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Fax: (571) 273-2885

FROM: Winston Hsu, PATENT AGENT, REG. NO.: 41,526

SERIAL NO.: 10/707,453

ATTORNEY DOCKET NO.: ADTP0048USA0

SUBJECT: ISSUE FEE PAYMENT

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Winston Hsu 04/10/2006

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**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

4

Application Number

10/707,453

Filing Date

12/15/2003

First Named Inventor

Che-Chih Chang

Art Unit

2871

Examiner Name

Chowdhury, Tarifur Rashid

Attorney Docket Number

ADTP0048USA

ENCLOSURES

(Check all that apply)



Fee Transmittal Form



Fee Attached



Amendment/Reply



After Final



Affidavits/declaration(s)



Extension of Time Request



Express Abandonment Request



Information Disclosure Statement



Certified Copy of Priority Document(s)

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Drawing(s)



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Petition to Convert to a
Provisional ApplicationPower of Attorney, Revocation
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CD, Number of CD(s) _____



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After Allowance Communication to TC

Appeal Communication to Board
of Appeals and InterferencesAppeal Communication to TC
(Appeal Notice, Brief, Reply Brief)

Proprietary Information



Status Letter

Other Enclosure(s) (please identify
below):

Reminder of the Title Change

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name

North America Intellectual Property Corporation

Signature

Winston Hsu

Printed name

Winston Hsu

Date

04/10/2006

Reg. No.

41,526

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

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Alex Liang

Typed or printed name

Alex Liang

Date

04/10/2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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027765 7590 03/16/2006

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Alex Liang	(Depositor's name)
<i>Alex Liang</i>	(Signature)
04/10/2006	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,453	12/15/2003	Che-Chih Chang	ADTP0048USA	1452

TITLE OF INVENTION: BACKLIGHT MODULE AND A LIQUID CRYSTAL DISPLAY USING THE SAME

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1400	\$300	\$1700	06/16/2006

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHOWDHURY, TARIFUR RASHID	2871	349-069000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list
 (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Winston Hsu
 2 _____
 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

AU Optronics Corp.

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

No.1, Li-Hsin Road 2, Science-Based Industrial Park, Hsin-Chu City, Taiwan. R.O.C.

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are enclosed:

☒ Issue Fee
☒ Publication Fee (No small entity discount permitted)
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☐ Payment by credit card. Form PTO-2038 is attached.
☒ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number 50-3105 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature Winston Hsu
 Typed or printed name Winston Hsu

Date 04/10/2006
 Registration No. 41,526

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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**BACKLIGHT MODULE AND A LIQUID CRYSTAL DISPLAY USING THE
SAME**

Appl. No. : 10/707,453 Confirmation No. 1452
Applicant : Che-Chih Chang et al.
Filed : December 15,2003
TC/A.U. : 2871
Examiner : Chowdhury, Tarifur Rashid
Docket No. : ADTP0048USA0
Customer No. : 27765

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

5 Subject: Reminder of the Title Change

Dear Sir,

10 The applicant has requested to substitute the title of the current invention in the
Response to Office action (Amendment to the Specification) submitted on
08/16/2005.

15 The applicant hereby made the payment of USD 1700 for the issue fee and
publication fee and would like to have the patent issued with the changed title:
**“BACKLIGHT MODULE AND A LIQUID CRYSTAL DISPLAY USING THE
SAME”** according to the request presented in the said communication.

Please confirm your receiving of this communication by the following
contacting information.

Respectfully submitted,

5 Winston Hsu

Date: 04/10/2006

Winston Hsu, Patent Agent No. 41,526

P.O. BOX 506, Merrifield, VA 22116, U.S.A.

Voice Mail: 302-729-1562

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10 e-mail : winstonhsu@naipo.com

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